# Fig. 1A SEQ. ID NO:1

MTVARPSVPAALPLLGELPRLLLLVLLCLPAVWGDCGLPPDVPNAQPALE	50
GRTSFPEDTVITYKCEESFVKIPGEKDSVICLKGSQWSDIEEFCNRSCEV	100
PTRLNSASLKQPYITQNYFPVGTVVEYECRPGYRREPSLSPKLTCLQNLK	150
WSTAVEFCKKKSCPNPGEIRNGQIDVPGGILFGATISFSCNTGYKLFGST	200
SSFCLISGSSVQWSDPLPECREIYCPAPPQIDNGIIQGERDHYGYRQSVT	250
YACNKGFTMIGEHSIYCTVNNDEGEWSGPPPECRGKSLTSKVPPTVQKPT	300
TVNVPTTEVSPTSQKTTTKTTTPNAQATRSTPVSRTTKHFHETTPNKGSG	350
TTSGTTRLLSGHTCFTLTGLLGTLVTMGLLT	

# Fig. 1B SEQ. ID NO:2

	l ccgctgggcg	tagctgcgac	toggoggagt	cccggcggcg	cgtccttgtt	ctaacccggc
6	l gegecatgae	cgtcgcgcgg	ccgagcgtgc	ccgcggcgct	gcccctcctc	ggggagctgc
12	l cccggctgct	gctgctggtg	ctgttgtgcc	tgccggccgt	gtggggtgac	tgtggccttc
18	l ccccagatgt	acctaatgcc	cagccagctt	tggaaggccg	tacaagtttt	cccgaggata
24	l ctgtaataac	gtacaaatgt	gaagaaagct	ttgtgaaaat	tcctggcgag	aaggactcag
30	l tgatctgcct	taagggcagt	caatggtcag	atattgaaga	gttctgcaat	cgtagctgcg
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42	1 ttccagtcgg	tactgttgtg	gaatatgagt	gccgtccagg	ttacagaaga	gaacettete
48	l tatcaccaaa	actaacttgc	cttcagaatt	taaaatggtc	cacagcagtc	gaattttgta
54	l aaaagaaatc	atgccctaat	ccgggagaaa	tacgaaatgg	tcagattgat	gtaccaggtg
60	1 gcatattatt	tggtgcaacc	atctccttct	catgtaacac	agggtacaaa	ttatttggct
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72	1 agtgcagaga	aatttattgt	ccagcaccac	cacaaattga	caatggaata	attcaagggg
78	l aacgtgacca	ttatggatat	agacagtctg	taacgtatgc	atgtaataaa	ggattcacca
84	1 tgattggaga	gcactctatt	tattgtactg	tgaataatga	tgaaggagag	tggagtggcc
90	l caccacctga	atgcagagga	aaatctctaa	cttccaaggt	cccaccaaca	gttcagaaac
96	1 ctaccacagt	aaatgttcca	actacagaag	tctcaccaac	ttctcagaaa	accaccacaa
102	1 aaaccaccac	accaaatgct	caagcaacac	ggagtacacc	tgtttccagg	acaaccaagc
108	l attttcatga	aacaacccca	aataaaggaa	gtggaaccac	ttcaggtact	acccgtcttc
114	l tatctgggca	cacgtgtttc	acgttgacag	gtttgcttgg	gacgctagta	accatgggct
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126	l agtttcttag	acttatctgc	atattggata	aaataaatgc	aattgtgctc	ttcatttagg
132	1 atgctttcat	tgtctttaag	atgtgttagg	aatgtcaaca	gagcaaggag	aaaaaaggca
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156	1 ccacttataa	aggaaataaa	aaatgaaaaa	cattatttgg	atatcaaaag	caaataaaaa
162	1 cccaattcag	tctcttctaa	gcaaaattgc	taaagagaga	tgaaccacat	tataaagtaa
168	1 tetttggetg	taaggcattt	tcatctttcc	ttcgggttgg	caaaatattt	taaaggtaaa
174	l acatgctggt	gaaccagggg	tgttgatggt	gataagggag	gaatatagaa	tgaaagactg
180	1 aatcttcctt	tgttgcacaa	atagagtttg	gaaaaagcct	gtgaaaggtg	tcttctttga
186	1 cttaatgtct	ttaaaagtat	ccagagatac	tacaatatta	acataagaaa	agattatata
192	1 ttatttctga	atcgagatgt	ccatagtcaa	atttgtaaat	cttattcttt	tgtaatattt
198	1 atttatattt	atttatgaca	gtgaacattc	tgattttaca	tgtaaaacaa	gaaaagttga
204	1 agaagatatg	tgaagaaaaa	tgtatttttc	ctaaatagaa	ataaatgatc	ccattttttg
210	1 gt					

## Fig. 2 SEO. ID NO:3

MCLGRMGASSPRSPEPVGPPAPGLPFCCGGSLLAVVVLLALPVAWGQCNA PEWLPFARPTNLTDEFEFPIGTYLNYECRPGYSGRPFSIICLKNSVWTGA 150 KDRCRRKSCRNPPDPVNGMVHVIKGIQFGSQIKYSCTKGYRLIGSSSATC  ${ t IISGDTVIWD}{ t NETPICDRIPCGLPPTITNGDFISTNRENFHYGSVVTYRC}$ 200 250 NPGSGGRKVFELVGEPSIYCTSNDDQVGIWSGPAPQCIIPNKCTPPNVEN 300 GILVSDNRSLFSLNEVVEFRCQPGFVMKGPRRVKCQALNKWEPELPSCSR VCQPPPDVLHAERTQRDKDNFSPGQEVFYSCEPGYDLRGAASMRCTPQGD 350 400 WSPAAPTCEVKSCDDFMGQLLNGRVLFPVNLQLGAKVDFVCDEGFQLKGS 450 SASYCVLAGMESLWNSSVPVCEQIFCPSPPVIPNGRHTGKPLEVFPFGKA 500 VNYTCDPHPDRGTSFDLIGESTIRCTSDPQGNGVWSSPAPRCGILGHCQA 550 PDHFLFAKLKTQTNASDFPIGTSLKYECRPEYYGRPFSITCLDNLVWSSP 600 KDVCKRKSCKTPPDPVNGMVHVITDIQVGSRINYSCTTGHRLIGHSSAEC ILSGNAAHWSTKPPICQRIPCGLPPTIANGDFISTNRENFHYGSVVTYRC 650 NPGSGGRKVFELVGEPSIYCTSNDDQVGIWSGPAPQCIIPNKCTPPNVEN 700 750 GILVSDNRSLFSLNEVVEFRCQPGFVMKGPRRVKCQALNKWEPELPSCSR 800 VCOPPPDVLHAERTORDKDNFSPGQEVFYSCEPGYDLRGAASMRCTPQGD 850 WSPAAPTCEVKSCDDFMGOLLNGRVLFPVNLQLGAKVDFVCDEGFQLKGS SASYCVLAGMESLWNSSVPVCEQIFCPSPPVIPNGRHTGKPLEVFPFGKA 900 VNYTCDPHPDRGTSFDLIGESTIRCTSDPQGNGVWSSPAPRCGILGHCQA 950 PDHFLFAKLKTQTNASDFPIGTSLKYECRPEYYGRPFSITCLDNLVWSSP 1000 KDVCKRKSCKTPPDPVNGMVHVITDIQVGSRINYSCTTGHRLIGHSSAEC 1050 ILSGNTAHWSTKPPICQRIPCGLPPTIANGDFISTNRENFHYGSVVTYRC 1100 1150 NLGSRGRKVFELVGEPSIYCTSNDDQVGIWSGPAPQCIIPNKCTPPNVEN 1200 GILVSDNRSLFSLNEVVEFRCQPGFVMKGPRRVKCQALNKWEPELPSCSR VCOPPPEILHGEHTPSHQDNFSPGQEVFYSCEPGYDLRGAASLHCTPQGD 1300 WSPEAPRCAVKSCDDFLGQLPHGRVLFPLNLQLGAKVSFVCDEGFRLKGS SVSHCVLVGMRSLWNNSVPVCEHIFCPNPPAILNGRHTGTPSGDIPYGKE 1350 ISYTCDPHPDRGMTFNLIGESTIRCTSDPHGNGVWSSPAPRCELSVRAGH 1400 CKTPEOFPFASPTIPINDFEFPVGTSLNYECRPGYFGKMFSISCLENLVW SSVEDNCRRKSCGPPPEPFNGMVHINTDTQFGSTVNYSCNEGFRLIGSPS TTCLVSGNNVTWDKKAPICEIISCEPPPTISNGDFYSNNRTSFHNGTVVT YOCHTGPDGEQLFELVGERSIYCTSKDDQVGVWSSPPPRCISTNKCTAPE VENAIRVPGNRSFFSLTEIIRFRCQPGFVMVGSHTVQCQTNGRWGPKLPH CSRVCQPPPEILHGEHTLSHQDNFSPGQEVFYSCEPSYDLRGAASLHCTP OGDWSPEAPRCTVKSCDDFLGQLPHGRVLLPLNLQLGAKVSFVCDEGFRL KGRSASHCVLAGMKALWNSSVPVCEQIFCPNPPAILNGRHTGTPFGDIPY GKEISYACDTHPDRGMTFNLIGESSIRCTSDPQGNGVWSSPAPRCELSVP 1850 1900 AACPHPPKIQNGHYIGGHVSLYLPGMTISYTCDPGYLLVGKGFIFCTDQG IWSQLDHYCKEVNCSFPLFMNGISKELEMKKVYHYGDYVTLKCEDGYTLE 1950 GSPWSQCQADDRWDPPLAKCTSRAHDALIVGTLSGTIFFILLIIFLSWII LKHRKGNNAHENPKEVAIHLHSQGGSSVHPRTLQTNEENSRVLP

Fig. 3 SEQ. ID NO:4

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241	gaatgccgcc	ctggttattc	cggaagaccg	ttttctatca	tctgcctaaa	aaactcagtc
301	tggactggtg	ctaaggacag	gtgcagacgt	aaatcatgtc	gtaatcctcc	agatcctgtg
361	aatggcatgg	tgcatgtgat	caaaggcatc	cagttcggat	cccaaattaa	atattcttgt
421	actaaaggat	accgactcat	tggttaatag	tctgccacat	gcatcatctc	aggtgatact
481	gtcatttggg	ataatgaaac	acctatttgt	gacagaattc	cttgtgggct	accccccacc
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1921	agagagaatt	ttcactatgg	atcagtggtg	acctaccgct	gcaatcctgg	aagcggaggg
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3061	aatggcatgg	tgcatgtgat	cacagacatc	caggttggat	ccagaatcaa	ctattcttgt
			~			

3121 actacaggge accgaeteat tggteactea tetgetgaat gtatectete aggeaataet 3181 gcccattgga gcacgaagcc gccaatttgt caacgaattc cttgtgggct acccccaacc 3241 ategecaatg gagattteat tageaceaac agagagaatt tteactatgg ateagtggtg 3301 acctaccgct gcaatcttgg aagcagaggg agaaaggtgt ttgagcttgt gggtgagccc 3361 tocatatact gcaccagcaa tgacgatcaa gtgggcatct ggageggeec egeceeteag 3421 tgcattatac ctaacaaatg cacgecteca aatgtggaaa atggaatatt ggtatetgac 3481 aacagaagct tattttcctt aaatgaagtt gtggagttta ggtgtcagcc tggctttgtc 3541 atgaaaggac cccgccgtgt gaagtgccag gccctgaaca aatgggagcc agagttacca 3601 agetgeteca gggtgtgtea geegeeteca gaaateetge atggtgagea taccecaage 3661 catcaqqaca acttttcacc tgggcaggaa gtgttctaca gctgtgagcc tggctatgac 3721 ctcagagggg ctgcgtctct gcactgcaca ccccagggag actggagccc tgaagccccg 3781 agatgtgcag tgaaatcctg tgatgacttc ttgggtcaac tccctcatgg ccgtgtgcta 3841 tttccactta atctccaget tggggcaaag gtgtcctttg tctgtgatga agggtttcgc 3901 ttaaagggca gttccgttag tcattgtgtc ttggttggaa tgagaagcct ttggaataac 3961 aqtqttcctq tgtgtgaaca tatcttttgt ccaaatcctc cagctatcct taatgggaga 4021 cacacaggaa ctccctctgg agatattccc tatggaaaag aaatatctta cacatgtgac 4081 ccccacccag acagaggat gacetteaac etcattgggg agageaccat ccgctgeaca 4141 agtgaccete atgggaatgg ggtttggage ageeetgeee etegetgtga aetttetgtt 4201 cqtqctqqtc actgtaaaac cccagagcag tttccatttg ccagtcctac gatcccaatt 4261 aatgactttg agtttccagt cgggacatct ttgaattatg aatgccgtcc tgggtatttt 4321 gggaaaatgt tototatoto otgootagaa aacttggtot ggtoaagtgt tgaagacaac 4381 tgtagacgaa aatcatgtgg acctccacca gaacccttca atggaatggt gcatataaac 4441 acagatacac agtttggatc aacagttaat tattcttgta atgaagggtt tcgactcatt 4501 ggttccccat ctactacttg tctcgtctca ggcaataatg tcacatggga taagaaggca 4561 cctatttgtg agatcatatc ttgtgagcca cctccaacca tatccaatgg agacttctac 4621 agcaacaata gaacatcttt tcacaatgga acggtggtaa cttaccagtg ccacactgga 4681 ccagatggag aacagctgtt tgagcttgtg ggagaacggt caatatattg caccagcaaa 4741 gatgatcaag ttggtgtttg gagcageeet ecceeteggt gtatttetae taataaatge 4801 acagetecag aagttgaaaa tgeaattaga gtaecaggaa acaggagttt etttteeete 4861 actgagatca tcagatttag atgtcagccc gggtttgtca tggtagggtc ccacactgtg 4921 cagtgccaga ccaatggcag atgggggccc aagetgccac actgctccag ggtgtgtcag 4981 ccgcctccag aaatcctgca tggtgagcat accctaagcc atcaggacaa cttttcacct 5041 gggcaggaag tgttctacag ctgtgagccc agctatgacc tcagaggggc tgcgtctctg 5101 cactqcacqc cccagggaga ctggagccct gaagccccta gatgtacagt gaaatcctgt 5161 gatgacttcc tgggccaact coctcatggc cgtgtgctac ttccacttaa tctccagctt 5221 ggggcaaagg tgtcctttgt ttgcgatgaa gggttccgat taaaaggcag gtctgctagt 5281 cattgtgtct tggctggaat gaaagccctt tggaatagca gtgttccagt gtgtgaacaa 5341 atottttgtc caaatootoc agotatoott aatgggagac acacaggaac toootttgga 5401 qatattccct atqqaaaaqa aatatcttac gcatgcgaca cccacccaga cagagggatg 5461 accttcaacc tcattgggga gagetccatc cgctgcacaa gtgaccctca agggaatggg 5521 gtttggagca gccctgcccc tegctgtgaa ctttctgttc ctgctgcctg cccacatcca 5581 cccaagatcc aaaacgggca ttacattgga ggacacgtat ctctatatct tcctgggatg 5641 acaatcagct acacttgtga ccccggctac ctgttagtgg gaaagggctt cattttctgt 5701 acagaccagg gaatctggag ccaattggat cattattgca aagaagtaaa ttgtagcttc 5761 ccactgttta tgaatggaat ctcgaaggag ttagaaatga aaaaagtata tcactatgga 5821 gattatgtga ctttgaagtg tgaagatggg tatactctgg aaggcagtcc ctggagccag 5881 tgccaggcgg atgacagatg ggaccetect etggccaaat gtaceteteg tgcacatgat 5941 geteteatag tiggeaetti atetggtaeg atettettia tittaeteat eatitteete 6001 tottggataa ttotaaagoa cagaaaaggo aataatgoac atgaaaacco taaagaagtg 6061 gotatocatt tacattotea aggaggeage agegtteate ecegaactet geaaacaaat 6121 gaagaaaata gcagggteet teettgacaa agtactatac agetgaagaa catetegaat 6181 acaattttgg tgggaaagga gccaattgat ttcaacagaa tcagatctga gcttcataaa 6241 gtctttgaag tgacttcaca gagacgcaga catgtgcact tgaagatgct gccccttccc 6301 togtacctaq caaagctcct gcctctttgt gtgcgtcact gtgaaacccc cacccttctg 6361 cetegtgeta aacgeacaea gtatetagte aggggaaaag actgeattta ggagatagaa 6421 aatagtttgg attacttaaa ggaataaggt gttgcctgga atttctggtt tgtaaggtgg

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660	1 ctaatatttt	gattcatttt	ctgcctatct	tctttcacat	atgtgttttt	ttacatacgt
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672	1 cagtttagag	tgaaatatat	qctatatcag	tttttacttt	ctctagggag	aaaaattaat
678	1 ttactagaaa	ggcatgaaat	gatcatggga	agagtggtta	agactactga	agagaaatat
684	1 ttggaaaata	agatttcgat	atcttcttt	tttttgagat	ggagtctggc	tctgtctccc
690	1 aggctggagt	gcagtggcgt	aatctcggct	cactgcaacg	teegeeteee	g

250

350

## Fig. 4A

### SEQ. ID NO:5

MEPPGRRECPFPSWRFPGLLLAAMVLLLYSFSDACEEPPTFEAMELIGKP KPYYEIGERVDYKCKKGYFYIPPLATHTICDRNHTWLPVSDDACYRETCP YIRDPLNGQAVPANGTYEFGYQMHFICNEGYYLIGEEILYCELKGSVAIW 150 SGKPPICEKVLCTPPPKIKNGKHTFSEVEVFEYLDAVTYSCDPAPGPDPF SLIGESTIYCGDNSVWSRAAPECKVVKCRFPVVENGKQISGFGKKFYYKA TVMFECDKGFYLDGSDTIVCDSNSTWDPPVPKCLKVSTSSTTKSPASSAS GPRPTYKPPVSNYPGYPKPEEGILDSLDVWVIAVIVIAIVVGVAVICVVP YRYLQRRKKKGKADGGAEYATYQTKSTTPAEQRG

## Fig. 4B

## SEQ. ID NO:6

TID TAC						
1	tetgetttee	tccggagaaa	taacagcgtc	ttaagagaag	cgcatggagc	ctcccggccg
61	ccgcgagtgt	ccctttcctt	cctggcgctt	tcctgggttg	cttctggcgg	ccatggtgtt
121	gctgctgtac	tectteteeg	atgcctgtga	ggagccacca	acatttgaag	ctatggagct
181	cattggtaaa	ccaaaaccct	actatgagat	tggtgaacga	gtagattata	agtgtaaaaa
241	aggatacttc	tatatacctc	ctcttgccac	ccatactatt	tgtgatcgga	atcatacatg
301	gctacctgtc	tcagatgacg	cctgttatag	agaaacatgt	ccatatatac	gggatccttt
361	aaatqqccaa	gcagtccctg	caaatgggac	ttacgagttt	ggttatcaga	tgcactttat
421	ttgtaatgag	ggttattact	taattggtga	agaaattcta	tattgtgaac	ttaaaggatc
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541	aaaaataaaa	aatggaaaac	acacctttag	tgaagtagaa	gtatttgagt	atcttgatgc
601	aqtaacttat	agttgtgatc	ctgcacctgg	accagatcca	ttttcactta	ttggagagag
661	cacgatttat	tgtggtgaca	attcagtgtg	gagtcgtgct	gctccagagt	gtaaagtggt
721	caaatgtcga	tttccagtag	tcgaaaatgg	aaaacagata	tcaggatttg	gaaaaaaatt
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841	cacaattgtc	tgtgacagta	acagtacttg	ggatccccca	gttccaaagt	gtcttaaagt
901	gtcgacttct	tccactacaa	aatctccagc	gtccagtgcc	tcaggtccta	ggcctactta
961	caagceteca	gtctcaaatt	atccaggata	tcctaaacct	gaggaaggaa	tacttgacag
1021	tttggatgtt	tgggtcattg	ctgtgattgt	tattgccata	gttgttggag	ttgcagtaat
1081	ttgtgttgtc	ccgtacagat	atcttcaaag	gaggaagaag	aaagggaaag	cagatggtgg
1141	agctgaatat	gccacttacc	agactaaatc	aaccactcca	gcagagcaga	gaggctgaat
1201	agattccaca	acctggtttg	ccagttcatc	ttttgactct	attaaaatct	tcaatagttg
1261	ttattctqta	gtttcactct	catgagtgca	actgtggctt	agctaatatt	gcaatgtggc
1321	ttgaatgtag	gtagcatcct	ttgatgcttc	tttgaaactt	gtatgaattt	gggtatgaac
1381	agattgcctg	ctttccctta	aataacactt	agatttattg	gaccagtcag	cacagcatgc
1441				ttttataaaa	ttggcaaaat	tagagaaata
1501	tagttcacaa	tgaaattata	ttttctttgt			

Fig. 5

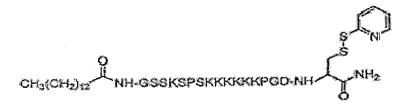


Fig. 6A SEQ. ID NO:7 ATA TAC GAA TTC AGA TCT ATG ACC GTC GCG CGG CCG AGC GTG

Fig. 6B SEQ. ID NO:8 ACA GTG CTC GAG CAT TCA GGT GGT GGG CCA CTC CA

Fig 7A SEQ. ID NO:9 ATA TAC CTC GAG TCC TAA CAA ATG CAC GCC TCC AAA TGT GG-3

Fig 7B SEQ. ID NO:10 ACA GTG ATG CAT TGG TTT GGG TTT TCA ACT TGG C

Fig 7C SEQ. ID NO:11 ATA TAC ATG CAT CTG ACT TTC CCA TTG GGA CAT CTT TAA AG

Fig 7D
SEQ. ID NO:12
ACA GTG AGA TCT TTA GTG ATG GTG ATG GTG ATG AAT TCC ACA GCG AGG GGC
AGG GCT

Fig. 8A SEQ ID NO:13

P Р S V P A A L T V Α R Μ V W G C P Α Р R L L L V L  $\mathbf{L}$  $\mathbf{L}$ G E L L L  $\mathbf{L}$  $\mathbf{T}$ S F P V Р N Α Q Ρ A L  $\mathbf{E}$ G  $\mathbb{R}$ P D C G L D K Ι ₽ G  $\mathbf{E}$ K S F V E V T Υ K С  $\mathbf{E}$ Р E D  $\mathbf{T}$ I F C R Ν S D I  $\mathbf{E}$ E S Q W S V Ι C L K G D T Ν Y Ρ Y I Q K Q C E V P T R L Ν S Α S L P S L Υ RΕ Ρ  $\mathbf{T}$ V V Ε Y  $\mathbf{E}$ C R Ρ G RF G V  $\mathbb{C}$ K S T V E  $\mathbf{F}$ Κ N L K W Α S P K L T C L Q G Ι L D V Р G G Q I K S CΡ Ν P G E Ι R Ν S Т S T G Υ K L F G F G Α T I S F S C Ν S D Ρ L P E C RE Ι S S V Q M F  $\mathbb{C}$ L S G I G E R D Η Υ Ν G I Q C Р Р P Q I D Y Α F Т I G Ε Η S K G Μ Y CV  $\mathbf{T}$ Α Ν Y  $\mathbb{R}$ Q S E  $\frac{C}{S}$ G P P S Ρ E G Ε M Υ С T V Ν Ν D V Ν Ν G I L D P V  $\mathbf{E}$ K. C  $\mathbf{T}$ P N S S Р Ν F V Μ P G F C Q R S F S L Ν E VV E R  $\mathbf{L}$ S P E  $\mathbf{L}$ P  $\mathbb{R}$ V K CQ Α L Ν K W E K G P RR T Q R D P P P D V L Η Α E C S R V CQ Y D L F E V F Υ S CE P G K D S P G Q Ν T P Q G D W S P A Α P  $\mathbf{T}$ C R S Μ  $\mathbb{R}$ G Α Α Ν G R V L F G Q L  $\mathbb{L}$ K S C D D  $\mathbf{F}$ Μ C  $\mathbf{E}$ V  $\mathbf{F}$ Q L F V C D  $\mathbf{E}$ G K V D L G Α P V Ν L Q S S S L W Ν G Μ E C V Α K G S S Α S Y L R Η I Р N G C P S P P V V V C Q I F P Ε T C D Ρ V N Y Т G K Ρ L E VF ₽ F G K A C T S ₽ R G T S F D L Ι G Ε S T I  $\mathbb{R}$ Η D G G V W S S P Α Р R C G I L Η G N D P Q D K L K T Q T Ν Α S C P Η F L F Α Q Α D F С  $\mathbb{R}$ Ρ Ε Y Y G R P T K Y  $\mathbb{E}$ F Ι G S ₽  $\mathbf{L}$ S Ρ K D V C K R K V W S L S Ι  $\mathbf{T}$ C  $\mathbf{L}$ D Ñ V I T D I Q G V Η P V Ν M K T Ρ P D S C I S G Η S T Т G Η R L I CV G S R Ν Υ S С Ι Q K P S Т P Α E C I L S G N Α Α Η W R S T Ν G F I C G P P T I Α Ν D R Ι P L R G S G G Η Υ G S V V T Y R C Ν ₽  $\mathbf{E}$ N F V E V  $\mathbf{E}$ P S Ι Y С Т S N D D Q F L G K V C I Ρ Ν K  $\mathsf{C}$  $\mathbf{T}$ P P Ν P Q Ι G W S G P Α I V V F S  $\mathbb{L}$ N E S Ν  $\mathbb{R}$ S L V G I V D N L  $\mathbf{E}$ V K C Q Α F K G P RR V Μ  $\mathsf{C}$ P G  $\mathbf{E}$ F R Q C P P Ρ D S V Q C R W E P E L P S L N K V S G Q  $\mathbf{E}$ D K D N F P T R V L Η Α E R Q C Т P S Μ R R G Α Α F Y S C $\mathbf{E}$ P G Y D  $\mathbb{L}$ F Μ K S CD D G W S P Α Α P T CE V Q D L G Α K V G R V L  $\mathbf{F}$ P V Ν L Q G Q L  $\mathbf{L}$ NS Α S Υ C V L F C Ε G F Q  $\mathbf{L}$ K G S D V D F C P S S V P V C E Q Ϊ Ν Ε S  $\mathbf{L}$ W A G Μ V F F G K Р L E Р Η Τ V P N G  $\mathbb{R}$ S P Ρ Ι G т S D L Η P D R Y T C D P G V Ν

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Fig. 8B SEQ. ID NO: 14

ATGACCGTCGCGCGGCCGAGCGTGCCCGCGCGCGCTGCCC CCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTTGTGAAAAATTCCTGGCGAGAAG GACTCAGTGATCTGCCTTAAGGGCAGTCAATGGTCAGATATTGAAGAGTTCTGCAATCGTAGC TGCGAGGTGCCAACAAGGCTAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTAT TTTCCAGTCGGTACTGTTGTGGAATATGAGTGCCGTCCAGGTTACAGAAGAGAACCTTCTCTA TCACCAAAACTAACTTGCCTTCAGAATTTAAAATGGTCCACAGCAGTCGAATTTTGTAAAAAG AAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACCAGGTGGCATATTA TTTGGTGCAACCATCTCCTTCTCATGTAACACAGGGTACAAATTATTTGGCTCGACTTCTAGT TTTTGTCTTATTTCAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGCAGAGAAATT TATTGTCCAGCACCACCACAATTGACAATGGAATAATTCAAGGGGAACGTGACCATTATGGA TATAGACAGTCTGTAACGTATGCATGTAATAAAGGATTCACCATGATTGGAGAGCACTCTATT TATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCCCACCACCTGAATGC TCGAGTCCTAACAAATGCACGCCTCCAAATGTGGAAAATGGAATATTGGTATCTGACAAC AGAAGCTTATTTCCTTAAATGAAGTTGTGGAGTTTAGGTGTCAGCCTGGCTTTGTCATG AAAGGACCCCGCCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC TGCTCCAGGGTATGTCAGCCACCTCCAGATGTCCTGCATGCTGAGCGTACCCAAAGGGAC AAGGACAACTTTTCACCTGGGCAGGAAGTGTTCTACAGCTGTGAGCCCGGCTACGACCTC AGAGGGGCTGCGTCTATGCGCTGCACACCCCAGGGAGACTGGAGCCCTGCAGCCCCCACA TGTGAAGTGAAATCCTGTGATGACTTCATGGGCCAACTTCTTAATGGCCGTGTGCTATTT AAAGGCAGCTCTGCTAGTTACTGTGTCTTGGCTGGAATGGAAAGCCTTTGGAATAGCAGT GTTCCAGTGTGTGAACAAATCTTTTGTCCAAGTCCTCCAGTTATTCCTAATGGGAGACAC ACAGGAAAACCTCTGGAAGTCTTTCCCTTTGGAAAAGCAGTAAATTACACATGCGACCCC CACCCAGACAGAGGGACGAGCTTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT GACCCTCAAGGGAATGGGGTTTGGAGCAGCCCTGCCCCTCGCTGTGGAATTCTGGGTCAC TGTCAAGCCCCAGATCATTTTCTGTTTGCCAAGTTGAAAACCCAAACCAATGCATCTGAC TTTCCCATTGGGACATCTTTAAAGTACGAATGCCGTCCTGAGTACTACGGGAGGCCATTC TCTATCACATGTCTAGATAACCTGGTCTGGTCAAGTCCCAAAGATGTCTGTAAACGTAAA TCATGTAAAACTCCTCCAGATCCAGTGAATGGCATGGTGCATGTGATCACAGACATCCAG GTTGGATCCAGAATCAACTATTCTTGTACTACAGGGCACCGACTCATTGGTCACTCATCT GCTGAATGTATCCTCTCGGGCAATGCTGCCCATTGGAGCACGAAGCCGCCAATTTGTCAA CGAATTCCTTGTGGGCTACCCCCCACCATCGCCAATGGAGATTTCATTAGCACCAACAGA AAGGTGTTTGAGCTTGTGGGTGAGCCCTCCATATACTGCACCAGCAATGACGATCAAGTG GGCATCTGGAGCGGCCCGGCCCCTCAGTGCATTATACCTAACAAATGCACGCCTCCAAAT GTGGAAAATGGAATATTGGTATCTGACAACAGAAGCTTATTTTCCTTAAATGAAGTTGTG GAGTTTAGGTGTCAGCCTGGCTTTGTCATGAAAGGACCCCGCCGTGTGAAGTGCCAGGCC CTGAACAAATGGGAGCCGGAGCTACCAAGCTGCTCCAGGGTATGTCAGCCACCTCCAGAT GTCCTGCATGCTGAGCGTACCCAAAGGGACAAGGACAACTTTTCACCCGGGCAGGAAGTG TTCTACAGCTGTGAGCCCGGCTATGACCTCAGAGGGGCTGCGTCTATGCGCTGCACACCC

CAGGGAGACTGGAGCCCTGCAGCCCCCACATGTGAAGTGAAATCCTGTGATGACTTCATG GGCCAACTTCTTAATGGCCGTGTGCTATTTCCAGTAAATCTCCAGCTTGGAGCAAAAGTG

Fig. 9A SEQ ID NO:15

							М	Т	V	А	R	. P	S	V	P	A	A	L	P	
L	L	G	E	L	P	R	L	L	L	L	V	L	L	C	L	P	Α	V	M	G
D	С	G	L	P	P	D	V	P	N	A	Q	P	A	L	Ε	G	R	T	S	F
P	E	D	${f T}$	V	I	$\mathbf{T}$	Y	K	C	$\mathbf{E}$	E	S	F	V	K	I	P	G	E	K
D	S	V	I	C	L	K	G	S	Q	M	S	D	I	Ε	E	F	C	N	R	S
С	E	V	P	T	R	L	N	S	А	S	L	K	Q	P	Y	I	$\mathbf{T}$	Q	N	Y
F	P	V	G	T	V	V	E	Y	E	C	R	Ρ	G	Y	R	R.	E	Р	S	L
S	P	K	L	T	С	L	Q	N	L	K	M	S	T	A	V	E	F	C	K	K
K	S	C	P	N	P	G	E	I	R	N	G	Q	I	D	V	P	G	G	I	L
F	G	A	$\mathbf{T}$	I	S	F	S	С	N	$\mathbf{T}$	G	Y	K	L	F	G	S	Т	S	S
F	C	.L	I	S	G	S	S	V	Q	M	S	D	P	L	P	E	C	R	E	I
Y	C	P	Α	P	P	Q	I	D	N	G	I	I	Q	G	E	R	D	H	Y	G
Y	R	Q	S	V	T	Y	A	С	N	K	G	F	${f T}$	M	I	G	E	H	S	I
Y	C	T	V	N	N	D	E	G	E	W	S	G	P	P	P	E	<u>C</u>	-	**	
S	S	P	N	K	С	$\mathbf{T}$	P	P	N	V	E	N	G	I	L	V	S	D	N	
R	S	L	F	S	L	N	E	V	V	E	F	R	C	Q	P	G	F	V	M	
K	G	P	R	R	V	K	С	Q	A	L	N	K	W	E	P	E	L	P	S	
C	S	R	V	С	Q	P	P	P	D	Λ	Ļ	H	A	E	R	T	Q	R	D	
K	D	N	F	S	P	G	Q	E	V	F	Y	S	С	E	Р	G	Y	D	L	
R	G	A	A	S	M	R	С	${f T}$	P	Q	G	D	W	S	P	A	A	P	T	
C	Ē	V	K	S	С	D	D	F	M	G	Q	L	L	N	G	R	V	L	F	
P	V	N	L	Q	L	G	A	K	V	D	F	V	C	D	E	G	F	Q	L	
K	G	S	S	A	S	Y	C	V	L	A	G	M	E	S	L	W	N	S R	S H	
V	Р	V	С	E	Q	I	F	C	P	S	P	P	V	I	P	N T	G	R D	P	
$\mathbf{T}$	G	K	P	L	E	V	F	P	F	G	K	A	V	N T	Y	R	C	T	S	
H	P	D	R	G	T	S	F	D	L	I	G	Ε	S	C	G	I	L	Ġ	Н	
D	P	Q	G	И	G	V	W	S	S	P	A	P K	R T		T	N	A	S	D	
C	Q	A	P	D	H	F	L	F	A	K	L	r. P	E	Q Y	Y	G G	R	P	F	
F	P	I	G	T	S	L	K	Y	E	C	R S	P	K	D	V	C	K	R	K	
S	I.	T	C	L	D	N	L	V	W	S		V	Н	V	I	T	D	I	Q	
S	C	K	T	P	P	D	P	V	N	G	M				I	G	H	s	S	
V	G	S	R	I	N	Y	S	C	T	T H	G	H S	R T	L K	P	P	I	C	Q	
A	E	C	I	L	S	G	N P	A T	A I	н А	N	S G	D	F	I	S	T	И	R	
R.	I	P	C	G	L	P S	V	V.	$^{\perp}$	A Y	R.	C	N	r P	G	S	Ġ	G	R	
E	N	F	H	Y L	G V	5 G	E	v P	S	I	Y.	C	T	S	N	D	D	Q	V	
K G	V I	F W	E S	G	v P	A	P	0	C	I	I	P	N	K	C	T	P	P	N	
G	T	ħΑ	S	5	r	- □	E.	$\sim$	_	-1-		-			_	_	_			

10/25 V Ν V S D N R S L F S L Ν E V V E G I L C P F V G V  $\mathbb{C}$ Q Α E F G K Ρ R R K R Q М C V C Q Ρ P P D  $\mathbb{L}$ Ν K W E P  $\mathbf{E}$  $\mathbf{L}$ P S S R V  $\nabla$ L  $\mathbf{E}$ R T Q R D K D N  $\mathbb{F}$ S Ρ G Q E Η Α Y R G S Μ R C T ₽ F Y S C E  $\mathbb{P}$ G D L Α Α C D D F ₽ T C E V K S M G D W S P Α Q А V G G R V L F P V Ν  $\mathbf{L}_{\mathbf{J}}$ Q  $\mathbf{L}$ G Α Κ Q L L Ν C V D F V C D E G F Q L K G S S Α S Y L F Α G E S S VP V C $\mathbf{E}$ Q Ι C Ρ Μ S  $\mathbf{L}$ W Ν S R Н  $\mathbf{T}$ G K Ρ L E V F Ρ F P P V Ι Р Ν G C D P P RG Т S F D G Υ Т D L K A V Ν Η Ι C T S P Q G G V W S S G E S Т Ι R D Ν C Ρ D Η F L F Α P A P R С G I L G Η Q Α F K K T T Α S D Ρ Ι G T S L K Y E L Q N F I Т C D V W C R P E Y Y G R P S L N L C T ₽ P V S C S K P D Ν S P K D V K  $\mathbb{R}$ K G Μ V H V I Т D I Q V G S I C T T G Η S S  $\mathbb{R}$ Ν Y S G R L Ι Η T Р I  $\mathsf{C}$ E I W S K Ρ Q Α С L S G N Α A Η C F Ι S T Ν  $\mathbb{R}$ R I P G L P P T Ι Α Ν G D T E S V V Y C G G G RΝ F Η Υ G  $\mathbb{R}$ NΡ S K V F  $\mathbf{E}$ L V G E P S I Y C  $\mathbf{T}$ S Ν D D Q V G I S G P Α P Q C I Ι P Ν K C Т Ρ P N W E V V V  $\mathbf{E}$ Ν G Ι L V S D Ν R S  $\mathbf{L}$  $\mathbf{F}$ S L Ν C E F R CÒ Ρ G F V М K G Ρ R R V K Q A P C S V CΡ Р Ρ D L N K W  $\mathbf{E}$ E L P S R Q D F S Ρ G Q E V V  $\mathbf{L}$ Η А E R  $\mathbf{T}$ Q R D K Ν C T F P G A S R P Y S  $\mathsf{C}$ Ε G Y D L R Α Μ Q G M P P T C $\mathbf{E}$ V K S С D D F Μ D S Α Α V F ₽ V Q G A K V G Q L L Ν G R L Ν L L D F  $\nabla$ С D Ε G F Q L K G S S Α S Υ C V L А G M  $\mathbf{E}$ S W Ν S S V P V CΕ Q I F C P L  $\mathbf{T}$ Ρ L E F P F S Ρ P V I Ρ Ν G  $\mathbb{R}$ H G K V G K Α V Ν Υ Т C D Ρ Η Р D R G Т S F D L C V S S G  $\mathbf{T}$ T S P Q G N G W I E S Ι RD P P RC G Η Η Η Η Η Η

Fig 9B SEQ. ID NO:16

#### ATGACCGTCGCGCGGCCGAGCGTGCCCGCGCGCGCTGCCC

TCGAGTCCTAACAAATGCACGCCTCCAAATGTGGAAAATGGAATATTGGTATCTGACAAC AGAAGCTTATTTTCCTTAAATGAAGTTGTGGAGTTTAGGTGTCAGCCTGGCTTTGTCATG AAAGGACCCCGCCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC TGCTCCAGGGTATGTCAGCCACCTCCAGATGTCCTGCATGCTGAGCGTACCCAAAGGGAC AAGGACAACTTTTCACCTGGGCAGGAAGTGTTCTACAGCTGTGAGCCCGGCTACGACCTC AGAGGGGCTGCGTCTATGCGCTGCACACCCCAGGGAGACTGGAGCCCTGCAGCCCCCACA TGTGAAGTGAAATCCTGTGATGACTTCATGGGCCAACTTCTTAATGGCCGTGTGCTATTT AAAGGCAGCTCTGCTAGTTACTGTGTCTTGGCTGGAATGGAAAGCCTTTGGAATAGCAGT GTTCCAGTGTGTGAACAAATCTTTTGTCCAAGTCCTCCAGTTATTCCTAATGGGAGACAC ACAGGAAAACCTCTGGAAGTCTTTCCCTTTGGAAAAGCAGTAAATTACACATGCGACCCC CACCCAGACAGAGGGACGAGCTTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT GACCCTCAAGGGAATGGGGTTTGGAGCAGCCCTGCCCCTCGCTGTGGAATTCTGGGTCAC TGTCAAGCCCCAGATCATTTTCTGTTTGCCAAGTTGAAAACCCAAACCAATGCATCTGAC TTTCCCATTGGGACATCTTTAAAGTACGAATGCCGTCCTGAGTACTACGGGAGGCCATTC TCTATCACATGTCTAGATAACCTGGTCTGGTCAAGTCCCAAAGATGTCTGTAAACGTAAA TCATGTAAAACTCCTCCAGATCCAGTGAATGGCATGGTGCATGTGATCACAGACATCCAG GTTGGATCCAGAATCAACTATTCTTGTACTACAGGGCACCGACTCATTGGTCACTCATCT GCTGAATGTATCCTCTCGGGCAATGCTGCCCATTGGAGCACGAAGCCGCCAATTTGTCAA CGAATTCCTTGTGGGCTACCCCCACCATCGCCAATGGAGATTTCATTAGCACCAACAGA AAGGTGTTTGAGCTTGTGGGTGAGCCCTCCATATACTGCACCAGCAATGACGATCAAGTG GGCATCTGGAGCGGCCCGGCCCCTCAGTGCATTATACCTAACAAATGCACGCCTCCAAAT GTGGAAAATGGAATATTGGTATCTGACAACAGAAGCTTATTTTCCTTAAATGAAGTTGTG GAGTTTAGGTGTCAGCCTGGCTTTGTCATGAAAGGACCCCGCCGTGTGAAGTGCCAGGCC CTGAACAAATGGGAGCCGGAGCTACCAAGCTGCTCCAGGGTATGTCAGCCACCTCCAGAT GTCCTGCATGCTGAGCGTACCCAAAGGGACAAGGACAACTTTTCACCCGGGCAGGAAGTG TTCTACAGCTGTGAGCCCGGCTATGACCTCAGAGGGGCTGCGTCTATGCGCTGCACACCC CAGGGAGACTGGAGCCCTGCAGCCCCCACATGTGAAGTGAAATCCTGTGATGACTTCATG GGCCAACTTCTTAATGGCCGTGTGCTATTTCCAGTAAATCTCCAGCTTGGAGCAAAAGTG GATTTTGTTTGTGATGAAGGATTTCAATTAAAAGGCAGCTCTGCTAGTTATTGTGTCTTG GCTGGAATGGAAAGCCTTTGGAATAGCAGTGTTCCAGTGTGTGAACAAATCTTTTGTCCA AGTCCTCCAGTTATTCCTAATGGGAGACACACAGGAAAACCTCTGGAAGTCTTTCCCTTT ATTGGAGAGAGCACCATCCGCTGCACAAGTGACCCTCAAGGGAATGGGGTTTGGAGCAGC CCTGCCCCTCGCTGTGGAATTCTGGGTCACTGTCAAGCCCCAGATCATTTTCTGTTTGCC AAGTTGAAAACCCAAACCAATGCATCTGACTTTCCCATTGGGACATCTTTAAAGTACGAA TGCCGTCCTGAGTACTACGGGAGGCCATTCTCTATCACATGTCTAGATAACCTGGTCTGG TCAAGTCCCAAAGATGTCTGTAAACGTAAATCATGTAAAACTCCTCCAGATCCAGTGAAT GGCATGGTGCATGTGATCACAGACATCCAGGTT

GGATCCAGAATCAACTATTCTTGTACTACAGGGCACCGACTCATTGGTCACTCATCT
GCTGAATGTATCCTCTCGGGCAATGCTGCCCATTGGAGCACGAAGCCGCCAATTTGTCAA
CGAATTCCTTGTGGGCTACCCCCCACCATCGCCAATGGAGATTTCATTAGCACCAACAGA
GAGAATTTTCACTATGGATCAGTGGTGACCTACCGCTGCAATCCTGGAAGCGGAGGAGA

Fig. 10A SEQ. ID NO:17 ATA TAC GAA TTC TGG TTG AGT CCA AAT ATG GTC CC

Fig. 10B SEQ. ID NO:18 ACA GTG AGA TCT TTA TCA TTT ACC CGG AGA CAG GGA G

Fig. 11A SEQ. ID NO:19

							ъ.	d.	' V	. 74	R	P	S	V	, b	A	Д	T	P	
L	L	G	E	L	P	R	M L	L	V L	'A L	. r. V	. F	. d L	C.	L	P	. д А	. V	W	G
D TI	C	G	L	Р	P	D	V	P	N	A	Q.	P	A	L	Ε	G	R	$\mathbf{T}^{-}$	s	F
P	Ē	D	T	V	I	T	Y	K	C	E	Ē	S	F	V	K	I	P	G	E	K
D	s	V	I	C	L	K	G	S	Q	W	S	D	I	E	E	F	C	N	R	S
С	E	V	P	${ m T}$	R	L	N	S	A	S	L	K	Q	P	Y	I	$\mathbf{T}$	Q	N	Y
F	P	V	G	$\mathbf{T}$	V	V	E	Y	E	С	R	P	G	Y	R	R	E	P	S	L
S	P	K	L	${f T}$	С	L	Q	N	L	K	W	S	T	A	V	E	F	С	K	K
K	S	С	P	N	P	G	E	I	R	N	G	Q	I	D	V	P	G	G	I	L
F	G	A	$\mathbf{T}$	I	S	F	S	С	N	$\mathbf{T}$	G	Y	K	L	F	G	S	T	S	S
F	С	L	I	S	G	S	S	V	Q	M	S	D	P	L	Р	Ε	C	R	E	Ι
Y	С	P	Α	Р	P	Q	I	D	N	G	I	I	Q	G	E	R	D	H	Y	G
Y	$\mathbb{R}$	Q	S	V	$\mathbf{T}$	Y	A	С	N	K.	G	F	$\mathbf{T}$	M	I	G	$\mathbf{E}$	H	S	I
Y.	C	$\mathbf{T}$	V	N	N	D	E	G	E	W	S	G	P	P	P	E	Ē	_		
S	S	P	N	K	С	${f T}$	P	P	N	V	E	N	G	I	L	V	S	D	N	

13/25 R F V M C 0 P G R S  $\mathbf{L}$ F S L И E V V Ε F P  $\mathbf{E}$ L Ρ S G P V K C Q A L N K W  $\mathbf{E}$ K R R V P ₽ Р D V L Η Α Ε  $\mathbb{R}$  $\mathbf{T}$ Q R n C S R C Q Ρ G Q E  $\nabla$ F Y S C Ε Ρ G Y D  $\mathbf{L}$ K D F S N T G W S Ρ Α Α Ρ  $\mathbf{T}$ C P Q DR G Α Α S М R V L F C Q  $\mathbf{L}$ L Ν G R С Ε V K S D D F M G F Q L F V С D  $\mathbf{E}$ G L V D ₽ V Q G Α K Ν L S S Ν S G  $\mathbf{E}$ L W S S Y C V L Α Μ K G S Α P V I P Ν G R Η C F C Р S P V Ρ V Ε Q I V Y  $\mathbf{T}$ C D P K N T G K ₽ L  $\mathbf{E}$ V F P F G Ά T C S T I Η ₽ D R G T S F D  $\mathbf{L}$ Ι G Ε S R R C G I L P G G V S S P Α Ρ D Q Ν W F G P ₽ C P S C P Α Ρ Ε L V  $\mathbf{E}$ S K Y G G S F F Р Р Κ P K D T L Μ I S R Ρ V L S E D P  $\mathbf{E}$ V Q F D V Q T Р E V  $\mathbf{T}$ C V V V  $\mathbf{T}$  $\mathbf{E}$ Q K Р R  $\mathbf{E}$ W V D G V  $\mathbf{E}$ V Η Ν A K N Υ Т 0 D M L N V V L Η Т R V V L F N S Y S T K S S Ι E C K V S Ν K G L Ρ G K E Y K Y  $\mathbf{T}$ P Ρ S Q S K G Q P R  $\mathbf{E}$ P Q V L I K Α Y P S T C V K G F Ε  $\mathbf{E}$ Μ T K Ν Q V S L L T P P D Ν Y K Τ D Ι V Ε W  $\mathbf{E}$ S Ν G Q  $\mathbf{E}$ Α T V K S G S F  $\mathbb{F}$ L Y S R $\mathbf{L}$ D Ρ V L D S D F S C S V Μ Η  $\mathbf{E}$ А L H Ν Η R M  $\mathbf{E}$ G Ν V Q K S ₽ G S Y T K S L L

Fig. 11B SEQ. ID NO:20

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AGAGGGGCTGCGTCTATGCGCTGCACACCCCAGGGAGACTGGAGCCCTGCAGCCCCCACA TGTGAAGTGAAATCCTGTGATGACTTCATGGGCCAACTTCTTAATGGCCGTGTGCTATTT AAAGGCAGCTCTGCTAGTTACTGTGTCTTGGCTGGAATGGAAAGCCTTTGGAATAGCAGT GTTCCAGTGTGTGAACAAATCTTTTGTCCAAGTCCTCCAGTTATTCCTAATGGGAGACAC ACAGGAAAACCTCTGGAAGTCTTTCCCTTTGGAAAAGCAGTAAATTACACATGCGACCCC CACCCAGACAGAGGGACGAGCTTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT GACCCTCAAGGGAATGGGGTTTGGAGCAGCCCTGCCCCTCGCTGTGGAATTCTG GTTGAGTCCAAATATGGTCCCCCATGCCCATCATGCCCAGCACCTGAGTTCCTG GGGGGACCATCAGTCTTCCTGTTCCCCCCAAAACCCAAGGACACTCTCATGATCTCCCGG ACCCCTGAGGTCACGTGCGTGGTGGTGGACGTGAGCCAGGAAGACCCCGAGGTCCAGTTC AACTGGTACGTGGATGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAG TTCAACAGCACGTACCGTGTGGTCAGCGTCCTCACCGTCCTGCACCAGGACTGGCTGAAC GGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGGCCTCCCGTCCTCCATCGAGAAAACC ATCTCCAAAGCCAAAGGGCAGCCCCGAGAGCCACAGGTGTACACCCTGCCCCCATCCCAG GAGGAGATGACCAAGAACCAGGTCAGCCTGACCTGCCTGGTCAAAGGCTTCTACCCCAGC GACATCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGGACAACTACAAGACCACGCCT CCCGTGCTGGACTCCGACGGCTCCTTCTTCCTCTACAGCAGGCTAACCGTGGACAAGAGC AGGTGGCAGGAGGGAATGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCAC TACACACAGAAGAGCCTCTCCCTGTCTCCGGGTAAATGATAAAGATCT

Fig. 12A

SEQ. ID NO:21 ATA TAC GAA TTC TGG GTC ACT GTG AGG AGC CAC CAA CAT TTG AAG C

Fig. 12B

SEO. ID NO:22

ACÀ GTG AGA TCT TTA GTG ATG GTG ATG GTG ATG CGA CAC TTT AAG ACA CTT TGG AAC

Fig. 13A

SEQ. ID NO:23 S V Ρ A A L Р V Α R P Ε P R L L L L V L L C L Ρ Α V W G G L L L F N A P A. L  $\mathbf{E}$ G R T S D C ₽ P D V Ρ Q G L С E S F V K Ι P G  $\mathbf{E}$ K I  $\mathbf{T}$ Y K  $\mathbf{E}$ P E Т V D Ι Ε  $\mathbf{E}$  $\mathbf{F}$ C Ν R S Q S D С L G S W D S V I K Р I  $\mathbf{T}$ Y Y Q N T R L Ν S Α S L Κ Q C E V Р E C R Y S G R R  $\mathbf{E}$ Ρ L E Y Ρ P V G Т V V F A V F C K K. T E T C L N L K W S S PKL Q G G I I D V P L R NG O K S C P ирсе I S T S K L F G S S F C  $^{\star}\mathrm{T}$ Y F G A $\mathbf{T}$ I S N G I Ι S S V W S D

15/25Ι Y G I Q G E R D Η Y Ι D N G C P A Ρ P Q Ι F Ι G E Η S G T Y V  $^{\rm T}$ Y A C Ν Κ Μ R Q S S G Ρ P Ρ E C Y CT V N N  $\Box$ E G  $\mathbf{E}$ W V S D Ν S S Р N K С T Ρ P N V  $\mathbf{E}$ N G Ι  $\mathbf{L}$  $\overline{R}$ Ε F R C Q P G F V М S L F S L Ν E V V С W  $\mathbf{E}$ P  $\mathbf{E}$ L Р S K G P  $\mathbb{R}$  $\mathbb{R}$ V Κ Q А L M ĸ R T R  $\Box$ C S V C Q ₽ ₽ P D V L Η A E Q  $\mathbb{R}$ E V F Y S С E P G Y D L K F S ₽ G Q D Ν G W S P ₽ Т  $\mathbf{T}$ D Α Α R G S Μ R C Р Q A Α F Ν G R V L Ε K S CD  $\mathbf{D}$ F Μ G 0 L L C 7.7 CD Ε G F 0 L D F V G Α K V Ρ V Ν L Q L S S K G S S Α S Υ C V L Α G Μ  $\mathbf{E}$ S L W N P Η V C C P S Р Р V Ι Ν G R Ρ V  $\mathbf{E}$ Q I F C F G V Ν Υ  $\mathbf{T}$  $\Box$ P T G K P L  $\mathbb{E}$ V F P K Α Т Т G E S  $\mathbf{T}$ I R C S Ρ D R G S F D L Ι Н P R C G I L G Η ₽ G V W S S P A D Q G N Р K Р Y Y T Μ E L Ι G K C  $\mathbf{E}$ E P Ρ F  $\mathbf{E}$ Α V Y C K K G Y F Υ I Р Р L  $\mathbf{E}$ Ι R D K G  $\mathbf{E}$ TР V S D D Α C Η W Α T Η T I С D R Ν L Ρ G 0 Α V P Α N Y T C Y I R  $\mathbb{D}$ L N R  $\mathbf{E}$ Р G Y L Ι F I C Ν Ε Y G  $\mathbf{T}$ Y  $\mathbf{E}$ F G Y Q M Η S V Α I W S G K P G Ε E I Υ C E K G L L Ι K G K Η T C T Ρ Ρ P K Ν Р I C Ε K V L Y C P F S E V Ε V F E Y L D Α V T S D A Y C Ν S P F S L I G E S  $\mathbf{T}$ I G D G ₽ D P V E V V K  $\mathsf{C}$ R F Þ V V S Α Ρ  $\mathbf{E}$ C K W R Α Y K Α Т V М F G F G K K F Y G K Q I S M V C D Ν S T Ι S F G S D E C D K G Y L D T W D Ρ Р V Ρ K C L Κ V S Η Η Η H H Η

Fig. 13B SEO. ID NO:24

ATGACCGTCGCGCGGCCGAGCGTGCCCGCGCGCGCTGCCC

AAAGGACCCCGCCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC TGCTCCAGGGTATGTCAGCCACCTCCAGATGTCCTGCATGCTGAGCGTACCCAAAGGGAC AAGGACAACTTTTCACCTGGGCAGGAAGTGTTCTACAGCTGTGAGCCCGGCTACGACCTC AGAGGGGCTGCGTCTATGCGCTGCACACCCCAGGGAGACTGGAGCCCTGCAGCCCCCACA TGTGAAGTGAAATCCTGTGATGACTTCATGGGCCAACTTCTTAATGGCCGTGTGCTATTT CCAGTAAATCTCCAGCTTGGAGCAAAAGTGGATTTTGTTGTGATGAAGGATTTCAATTA AAAGGCAGCTCTGCTAGTTACTGTGTCTTGGCTGGAATGGAAAGCCTTTGGAATAGCAGT GTTCCAGTGTGTGAACAAATCTTTTGTCCAAGTCCTCCAGTTATTCCTAATGGGAGACAC ACAGGAAAACCTCTGGAAGTCTTTCCCTTTGGAAAAGCAGTAAATTACACATGCGACCCC CACCCAGACAGAGGGACGAGCTTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT GACCCTCAAGGGAATGGGGTTTGGAGCAGCCCTGCCCCTCGCTGTGGAATTCTGGGTCAC TGTGAGGAGCCACCAACATTTGAAGCTATGGAGCTCATTGGTAAACCAAAACCCTACTAT GAGATTGGTGAACGAGTAGATTATAAGTGTAAAAAAGGATACTTCTATATACCTCCTCTT GCCACCCATACTATTTGTGATCGGAATCATACATGGCTACCTGTCTCAGATGACGCCTGT TATAGAGAAACATGTCCATATATACGGGATCCTTTAAATGGCCAAGCAGTCCCTGCAAAT GGGACTTACGAGTTTGGTTATCAGATGCACTTTATTTGTAATGAGGGTTATTACTTAATT GGTGAAGAATTCTATATTGTGAACTTAAAGGATCAGTAGCAATTTGGAGCGGTAAGCCC CCAATATGTGAAAAGGTTTTGTGTACACCACCTCCAAAAATAAAAAATGGAAAACACACC TTTAGTGAAGTAGAAGTATTTGAGTATCTTGATGCAGTAACTTATAGTTGTGATCCTGCA CCTGGACCAGATCCATTTTCACTTATTGGAGAGAGCACGATTTATTGTGGTGACAATTCA GTGTGGAGTCGTGCTCCAGAGTGTAAAGTGGTCAAATGTCGATTTCCAGTAGTCGAA AATGGAAAACAGATATCAGGATTTGGAAAAAAATTTTACTACAAAGCAACAGTTATGTTT GAATGCGATAAGGGTTTTTACCTCGATGGCAGCGACACAATTGTCTGTGACAGTAACAGT ACTTGGGATCCCCCAGTTCCAAAGTGTCTTAAA//GTGTCG//CATCACCATCACCATCAC TAAAGATCT

WESTERN BLOT OF HYBRID PROTEINS DAF-IgG4, DAF-CR1BB, and DAF-CR1B

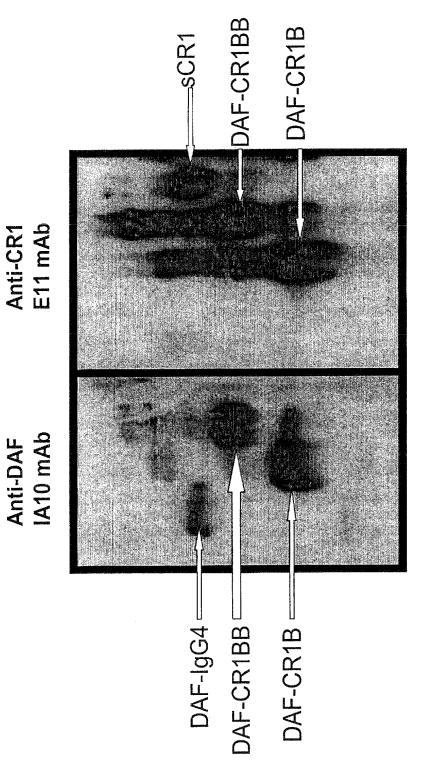


Fig. 14

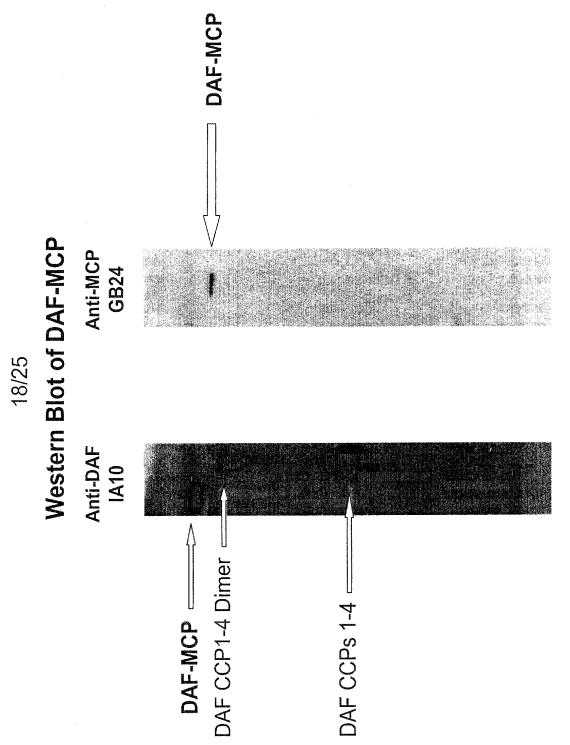
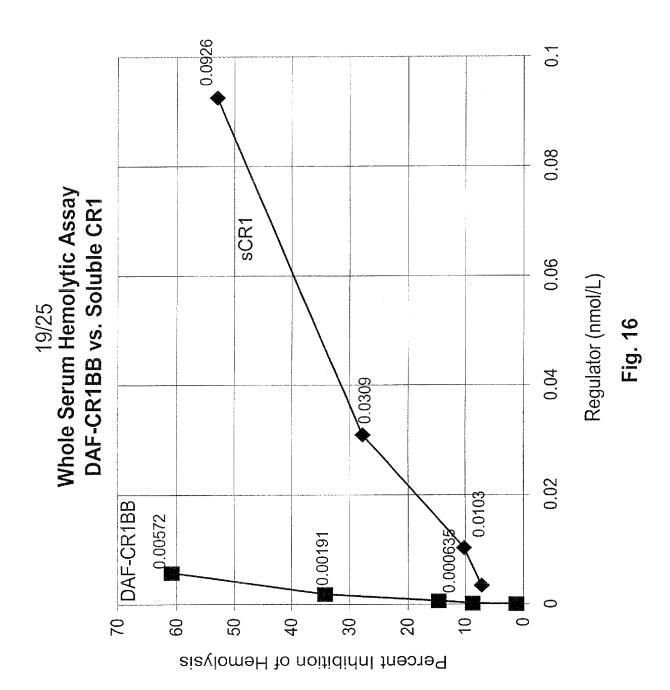
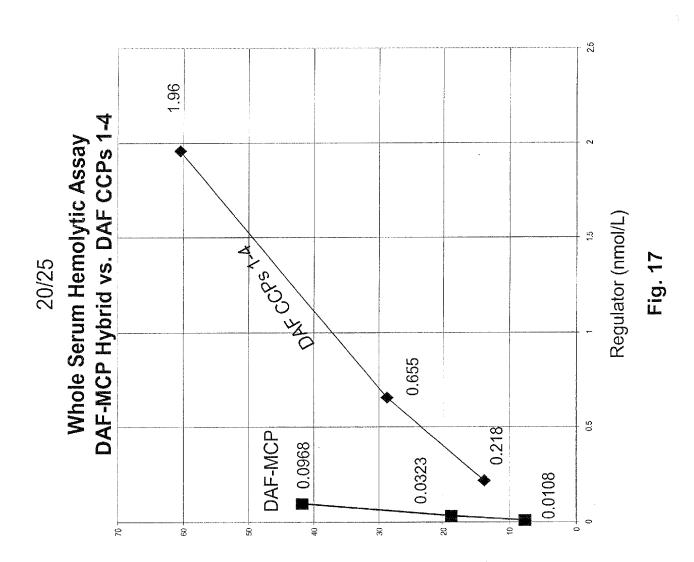


Fig. 15





Percent Inhibition of Hemolysis

21/25
Classical Pathway C3 Convertase Decay

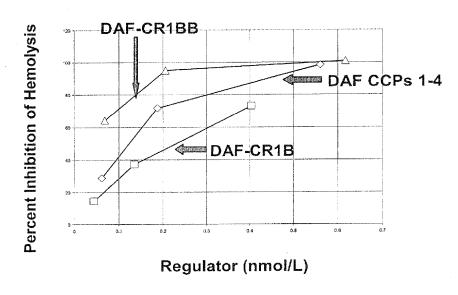


Fig. 18A

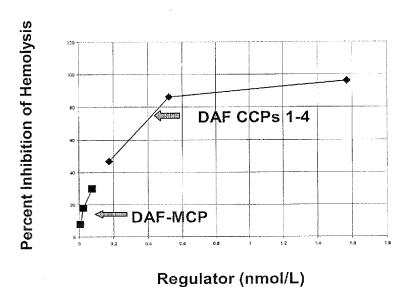
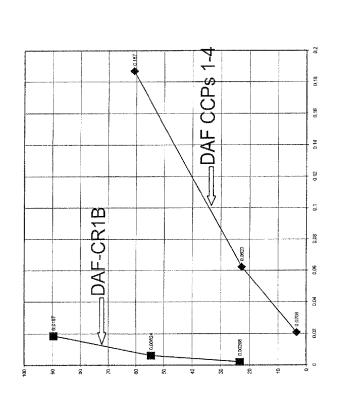


Fig. 18B

22/25

Classical Pathway C5 Convertase Decay DAF-CR1B vs DAF CCPs 1-4

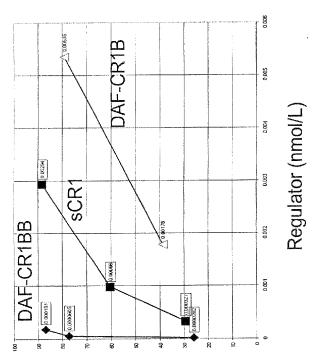


Percent Inhibition of Hemolysis

Regulator (nmol/L) Fig. 19

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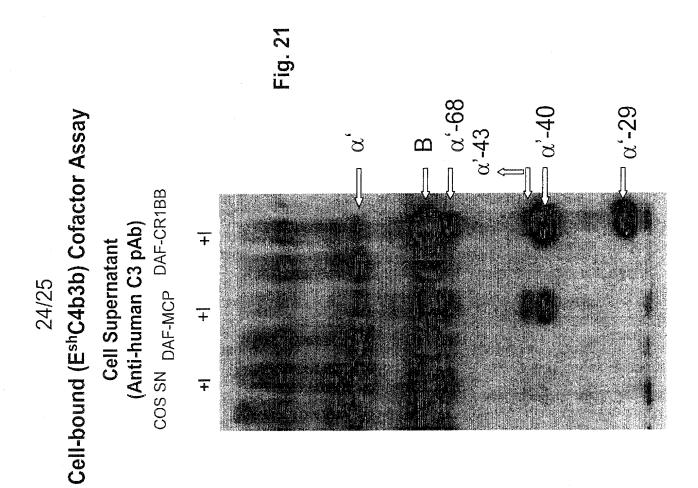
Classical Pathway C5 Convertase Decay DAF-CR1BB vs sCR1 vs DAF-CR1B



J

Fig. 20

Percent Inhibition of Hemolysis





Cell-bound (EshC4b3b) Cofactor Assays Cell Supernatant

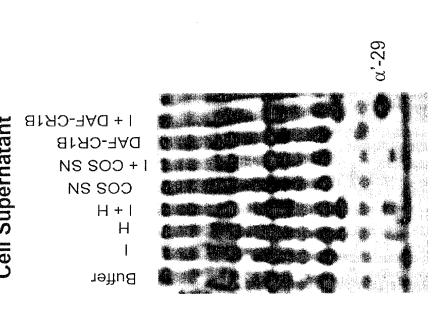


Fig. 22